

### **REMARKS/ARGUMENTS**

Applicant has carefully reviewed and considered the Office Action mailed on July 28, 2005, and the references cited therewith.

Claims 1, 11, 13-17, 20, 25, 34, and 43 are amended, claim 39 is canceled, and no claims are added; as a result, claims 1-38 and 40-52 are now pending in this application.

#### **Claim Objections**

Claim 39 was objected to under 37 C.F.R. 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claims, or amend the claims to place the claims in proper dependent form, or rewrite the claims in independent form. Claim 34 already recites an AC/DC converter.

Claim 39 has been canceled.

#### **§112 Rejection of the Claims**

Claims 11-24 were rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Applicant has considered the above rejection and has made appropriate amendments based upon comments made by the Examiner in the Office Action. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 112 rejection of claim 11, as well as those claims that depend therefrom.

#### **§102 Rejection of the Claims**

Claims 1-3, 5, 7, 9, 25, 31-36, 39, 41, 43, 44, 45, 47, 49 and 51 were rejected under 35 USC §102(b) as being anticipated by Andersen (WO 02/089303). Applicant respectfully traverses the rejection as follows.

Andersen appears to describe “[a]n AC-DC power converter having no input rectifiers . . .”, (see Abstract). However, from Applicant’s review, the Andersen reference does not describe a converter having a two transistor totem-pole configuration wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

In contrast, Applicant’s independent claim 1, as amended, recites:

said power converter including a charge pump capacitor,  
said charge pump capacitor coupled to a two transistor totem-pole configuration in said converter so as to drive a primary of an  
isolation transformer; and

wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Independent claim 25, as amended, each recites:

wherein the electrical storage element is coupled to a two transistor totem-pole configuration; and

wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Independent claim 34, as amended, recites:

said power converter including a charge pump capacitor,  
said charge pump capacitor coupled to a two transistor totem-pole configuration in said converter so as to drive a primary of an  
isolation transformer; and

wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

In addition independent claim 43, as amended, recites:

wherein said means for converting includes being coupled to a two transistor totem-pole configuration; and

wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

As such, Applicant respectfully submits that each and every element of independent claims 1, 25, 34, and 43, as amended, is not present in the Andersen reference. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 102 rejection of independent claims 1, 25, 34, and 43, as well as those claims that depend therefrom.

Claims 1-3, 5, 7, 9, 11, 18, 20, 22, 24, 25, 31-36, 39, 41, 43, 44, 45, 47, 49 and 51 were rejected under 35 USC §102(b) as being anticipated by Herbert (U.S. Patent No. 6,115,267). Applicant respectfully traverses the rejection as follows.

Herbert appears to describe an “AC-DC converter with no input rectifiers . . .”, (see Title). However, from Applicant’s review, the Herbert reference does not describe a converter having a two transistor totem-pole configuration

wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

In contrast, Applicant's independent claim 1, as amended, recites:

said power converter including a charge pump capacitor,  
said charge pump capacitor coupled to a two transistor totem-pole configuration in said converter so as to drive a primary of an  
isolation transformer; and

wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Independent claim 11, as amended, recites:

a least two transistor totem-pole configurations...

wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Independent claim 25, as amended, each recites:

wherein the electrical storage element is coupled to a two transistor totem-pole configuration; and

wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Independent claim 34, as amended, recites:

said power converter including a charge pump capacitor,  
said charge pump capacitor coupled to a two transistor totem-pole configuration in said converter so as to drive a primary of an  
isolation transformer; and

wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

In addition independent claim 43, as amended, recites:

wherein said means for converting includes being coupled to a two transistor totem-pole configuration; and

wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

As such, Applicant respectfully submits that each and every element of independent claims 1, 11, 25, 34, and 43, as amended, is not present in the Herbert reference. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 102 rejection of independent claims 1, 25, 34, and 43, as well as those claims that depend therefrom.

Claims 1-3, 5, 7, 10-18, 20, 22, 24-36, 39, 41-43, 47, 49, 51 and 52 were rejected under 35 USC §102(b) as being anticipated by Huang et al (U.S. Patent No. 6,344,979). Applicant respectfully traverses the rejection as follows.

Huang appears to describe an “LLC series resonant DC-to-DC converter”, (see Title). However, from Applicant’s review, the Huang reference does not describe a converter having a two transistor totem-pole configuration wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

In contrast, Applicant’s independent claim 1, as amended, recites:

said power converter including a charge pump capacitor,  
said charge pump capacitor coupled to a two transistor totem-pole configuration in said converter so as to drive a primary of an isolation transformer; and

wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Independent claim 11, as amended, recites:

a least two transistor totem-pole configurations...

wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Independent claim 25, as amended, each recites:

wherein the electrical storage element is coupled to a two transistor totem-pole configuration; and

wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Independent claim 34, as amended, recites:

said power converter including a charge pump capacitor,  
said charge pump capacitor coupled to a two transistor totem-pole configuration in said converter so as to drive a primary of an isolation transformer; and

wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

In addition independent claim 43, as amended, recites:

wherein said means for converting includes being coupled to a two transistor totem-pole configuration; and

wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

As such, Applicant respectfully submits that each and every element of independent claims 1, 11, 25, 34, and 43, as amended, is not present in the

Huang reference. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 102 rejection of independent claims 1, 25, 34, and 43, as well as those claims that depend therefrom.

§103 Rejection of the Claims

Claims 4, 6, 37, 38, 46 and 48 were rejected under 35 USC §103(a) as being unpatentable over Andersen (WO 02/089303) in view of Walsh et al (U.S. Patent No. 5,872,983). Applicant respectfully traverses the rejection as follows.

Claims 4 and 6 depend from independent claim 1. Applicant respectfully submits that claim 1, as amended, is in condition for allowance. From Applicant's review of the Walsh reference, the reference does not cure the deficiencies of the Andersen reference. That is, as recited in independent claim 1, as amended, of the present application, Walsh does not describe, teach, or suggest:

said power converter including a charge pump capacitor,  
said charge pump capacitor coupled to a two transistor totem-pole configuration in said converter so as to drive a primary of an  
isolation transformer; and

wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Claims 37 and 38 depend from independent claim 34. Applicant respectfully submits that claim 34, as amended, is in condition for allowance. From Applicant's review of the Walsh reference, the reference does not cure the deficiencies of the Andersen reference. That is, as recited in independent claim 34, as amended, of the present application, Walsh does not describe, teach, or suggest:

said power converter including a charge pump capacitor,  
said charge pump capacitor coupled to a two transistor totem-pole configuration in said converter so as to drive a primary of an  
isolation transformer; and

wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Claims 46 and 48 depend from independent claim 43. Applicant respectfully submits that claim 43, as amended, is in condition for allowance. From Applicant's review of the Walsh reference, the reference does not cure the deficiencies of the Andersen reference. That is, as recited in independent claim

43, as amended, of the present application, Walsh does not describe, teach, or suggest:

wherein the electrical storage element is coupled to a two transistor totem-pole configuration; and  
wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 103 rejection of dependent claims 4, 6, 37, 38, 46 and 48.

Claims 4, 6, 19, 21, 37, 38, 46 and 48 were rejected under 35 USC §103(a) as being unpatentable over Herbert (U.S. Patent No. 6,115,267) in view of Walsh et al (U.S. Patent No. 5,872,983). Applicant respectfully traverses the rejection as follows.

Claims 4 and 6 depend from independent claim 1. Applicant respectfully submits that claim 1, as amended, is in condition for allowance. From Applicant's review of the Walsh reference, the reference does not cure the deficiencies of the Herbert reference. That is, as recited in independent claim 1, as amended, of the present application, Walsh does not describe, teach, or suggest:

said power converter including a charge pump capacitor,  
said charge pump capacitor coupled to a two transistor totem-pole configuration in said converter so as to drive a primary of an isolation transformer; and  
wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Claims 19 and 21 depend from independent claim 11. Applicant respectfully submits that claim 11, as amended, is in condition for allowance. From Applicant's review of the Walsh reference, the reference does not cure the deficiencies of the Herbert reference. That is, as recited in independent claim 11, as amended, of the present application, Walsh does not describe, teach, or suggest, "a two transistor totem-pole configuration, wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration."

Claims 37 and 38 depend from independent claim 34. Applicant respectfully submits that claim 34, as amended, is in condition for allowance. From Applicant's review of the Walsh reference, the reference does not cure the

deficiencies of the Herbert reference. That is, as recited in independent claim 34, as amended, of the present application, Walsh does not describe, teach, or suggest:

said power converter including a charge pump capacitor,  
said charge pump capacitor coupled to a two transistor totem-pole configuration in said converter so as to drive a primary of an isolation transformer; and  
wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Claims 46 and 48 depend from independent claim 43. Applicant respectfully submits that claim 43, as amended, is in condition for allowance. From Applicant's review of the Walsh reference, the reference does not cure the deficiencies of the Herbert reference. That is, as recited in independent claim 43, as amended, of the present application, Walsh does not describe, teach, or suggest:

wherein the electrical storage element is coupled to a two transistor totem-pole configuration; and  
wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 103 rejection of dependent claims 4, 6, 19, 21, 37, 38, 46 and 48.

Claims 4, 6, 19, 21, 37, 38, 46 and 48 were rejected under 35 USC §103(a) as being unpatentable over Huang et al (U.S. Patent No. 6,344,979) in view of Walsh et al (U.S. Patent No. 5,872,983). Applicant respectfully traverses the rejection as follows.

Claims 4 and 6 depend from independent claim 1. Applicant respectfully submits that claim 1, as amended, is in condition for allowance. From Applicant's review of the Walsh reference, the reference does not cure the deficiencies of the Huang reference. That is, as recited in independent claim 1, as amended, of the present application, Walsh does not describe, teach, or suggest:

said power converter including a charge pump capacitor,  
said charge pump capacitor coupled to a two transistor totem-pole configuration in said converter so as to drive a primary of an isolation transformer; and

wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Claims 19 and 21 depend from independent claim 11. Applicant respectfully submits that claim 11, as amended, is in condition for allowance. From Applicant's review of the Walsh reference, the reference does not cure the deficiencies of the Huang reference. That is, as recited in independent claim 11, as amended, of the present application, Walsh does not describe, teach, or suggest, "a two transistor totem-pole configuration, wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration."

Claims 37 and 38 depend from independent claim 34. Applicant respectfully submits that claim 34, as amended, is in condition for allowance. From Applicant's review of the Walsh reference, the reference does not cure the deficiencies of the Huang reference. That is, as recited in independent claim 34, as amended, of the present application, Walsh does not describe, teach, or suggest:

said power converter including a charge pump capacitor,  
said charge pump capacitor coupled to a two transistor totem-pole configuration in said converter so as to drive a primary of an isolation transformer; and

wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Claims 46 and 48 depend from independent claim 43. Applicant respectfully submits that claim 43, as amended, is in condition for allowance. From Applicant's review of the Walsh reference, the reference does not cure the deficiencies of the Huang reference. That is, as recited in independent claim 43, as amended, of the present application, Walsh does not describe, teach, or suggest:

wherein said means for converting includes being coupled to a two transistor totem-pole configuration; and

wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 103 rejection of dependent claims 4, 6, 19, 21, 37, 38, 46 and 48.



Claims 8, 23, 40, and 50 were rejected under 35 USC §103(a) as being unpatentable over Andersen (WO 02/089303) in view of Balakrishnan (U.S. Patent No. 6,813,168). Applicant respectfully traverses the rejection as follows.

Claim 8 depends from independent claim 1. Applicant respectfully submits that claim 1, as amended, is in condition for allowance. From Applicant's review of the Balakrishnan reference, the reference does not cure the deficiencies of the Andersen reference. That is, as recited in independent claim 1, as amended, of the present application, Balakrishnan does not describe, teach, or suggest:

said power converter including a charge pump capacitor,  
said charge pump capacitor coupled to a two transistor totem-pole configuration in said converter so as to drive a primary of an isolation transformer; and

wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Claim 23 depends from independent claim 11. Applicant respectfully submits that claim 11, as amended, is in condition for allowance. From Applicant's review of the Balakrishnan reference, the reference does not cure the deficiencies of the Andersen reference. That is, as recited in independent claim 11, as amended, of the present application, Balakrishnan does not describe, teach, or suggest, "a two transistor totem-pole configuration, wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration."

Claim 40 depends from independent claim 34. Applicant respectfully submits that claim 34, as amended, is in condition for allowance. From Applicant's review of the Balakrishnan reference, the reference does not cure the deficiencies of the Andersen reference. That is, as recited in independent claim 34, as amended, of the present application, Balakrishnan does not describe, teach, or suggest:

said power converter including a charge pump capacitor,  
said charge pump capacitor coupled to a two transistor totem-pole configuration in said converter so as to drive a primary of an isolation transformer; and

wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Claim 50 depends from independent claim 43. Applicant respectfully submits that claim 43, as amended, is in condition for allowance. From

Applicant's review of the Balakrishnan reference, the reference does not cure the deficiencies of the Andersen reference. That is, as recited in independent claim 43, as amended, of the present application, Balakrishnan does not describe, teach, or suggest:

wherein the electrical storage element is coupled to a two transistor totem-pole configuration; and  
wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 103 rejection of dependent claims 8, 23, 40, and 50.

Claims 8, 23, 40, and 50 were rejected under 35 USC §103(a) as being unpatentable over Herbert (U.S. Patent No. 6,115,267) in view of Balakrishnan (U.S. Patent No. 6,813,168). Applicant respectfully traverses the rejection as follows.

Claim 8 depends from independent claim 1. Applicant respectfully submits that claim 1, as amended, is in condition for allowance. From Applicant's review of the Balakrishnan reference, the reference does not cure the deficiencies of the Herbert reference. That is, as recited in independent claim 1, as amended, of the present application, Balakrishnan does not describe, teach, or suggest:

said power converter including a charge pump capacitor,  
said charge pump capacitor coupled to a two transistor totem-pole configuration in said converter so as to drive a primary of an isolation transformer; and  
wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Claim 23 depends from independent claim 11. Applicant respectfully submits that claim 11, as amended, is in condition for allowance. From Applicant's review of the Balakrishnan reference, the reference does not cure the deficiencies of the Herbert reference. That is, as recited in independent claim 11, as amended, of the present application, Balakrishnan does not describe, teach, or suggest, "a two transistor totem-pole configuration, wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration."

Claim 40 depends from independent claim 34. Applicant respectfully submits that claim 34, as amended, is in condition for allowance. From Applicant's review of the Balakrishnan reference, the reference does not cure the deficiencies of the Herbert reference. That is, as recited in independent claim 34, as amended, of the present application, Balakrishnan does not describe, teach, or suggest:

said power converter including a charge pump capacitor,  
said charge pump capacitor coupled to a two transistor totem-pole configuration in said converter so as to drive a primary of an isolation transformer; and  
wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Claim 50 depends from independent claim 43. Applicant respectfully submits that claim 43, as amended, is in condition for allowance. From Applicant's review of the Balakrishnan reference, the reference does not cure the deficiencies of the Herbert reference. That is, as recited in independent claim 43, as amended, of the present application, Balakrishnan does not describe, teach, or suggest:

wherein said means for converting includes being coupled to a two transistor totem-pole configuration; and  
wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 103 rejection of dependent claims 8, 23, 40, and 50.

Claims 8, 23, 40, and 50 were rejected under 35 USC §103(a) as being unpatentable over Huang et al (U.S. Patent No. 6,344,979) in view of Balakrishnan (U.S. Patent No. 6,813,168). Applicant respectfully traverses the rejection as follows.

Claim 8 depends from independent claim 1. Applicant respectfully submits that claim 1, as amended, is in condition for allowance. From Applicant's review of the Balakrishnan reference, the reference does not cure the deficiencies of the Huang reference. That is, as recited in independent claim 1, as amended, of the present application, Balakrishnan does not describe, teach, or suggest:

said power converter including a charge pump capacitor,  
said charge pump capacitor coupled to a two transistor totem-pole

configuration in said converter so as to drive a primary of an isolation transformer; and  
wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Claim 23 depends from independent claim 11. Applicant respectfully submits that claim 11, as amended, is in condition for allowance. From Applicant's review of the Balakrishnan reference, the reference does not cure the deficiencies of the Huang reference. That is, as recited in independent claim 11, as amended, of the present application, Balakrishnan does not describe, teach, or suggest, "a two transistor totem-pole configuration, wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration."

Claim 40 depends from independent claim 34. Applicant respectfully submits that claim 34, as amended, is in condition for allowance. From Applicant's review of the Balakrishnan reference, the reference does not cure the deficiencies of the Huang reference. That is, as recited in independent claim 34, as amended, of the present application, Balakrishnan does not describe, teach, or suggest:

said power converter including a charge pump capacitor,  
said charge pump capacitor coupled to a two transistor totem-pole configuration in said converter so as to drive a primary of an isolation transformer; and  
wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Claim 50 depends from independent claim 43. Applicant respectfully submits that claim 43, as amended, is in condition for allowance. From Applicant's review of the Balakrishnan reference, the reference does not cure the deficiencies of the Huang reference. That is, as recited in independent claim 43, as amended, of the present application, Balakrishnan does not describe, teach, or suggest:

wherein said means for converting includes being coupled to a two transistor totem-pole configuration; and  
wherein a parasitic diode is coupled across at least one transistor in the two transistor totem-pole configuration.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 103 rejection of dependent claims 8, 23, 40, and 50.

**CONCLUSION**

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney Gregg W. Wisdom at (360) 212-8052 to facilitate prosecution of this matter.

At any time during the pendency of this application, please charge any additional fees or credit overpayment to the Deposit Account No. 08-2025.

CERTIFICATE UNDER 37 CFR §1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS AMENDMENT Commissioner for Patents, P.O. BOX 1450, Alexandria, VA 22313-1450 on this 25<sup>th</sup> day of October, 2005.

Shannon L. Day  
Name

[Signature]  
Signature

Respectfully Submitted,  
B. Mark Hirst

By his Representatives,  
BROOKS & CAMERON, PLLC  
1221 Nicollet Avenue, Suite 500  
Minneapolis, MN 55403

By: [Signature]  
Edward J. Brooks III  
Reg. No. 40,925

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